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XVIII.—*Notes on Birds observed in Switzerland; chiefly in the Cantons of Vaud and Neuchâtel.* By HOWARD SAUNDERS, F.L.S., F.Z.S.

THE present paper contains—with few exceptions—the results of personal experiences during twelve months in Switzerland. My excuse for its poverty must be that liability to sudden recall to England prevented me from making long excursions in the mountains, and even compelled me to reside near one of the main lines of communication with London; so that the birds mentioned are chiefly those which came within notice during the course of easy walks. I saw comparatively little of the habits of the Alpine species, many of which, however, have already been well described by my friend Mr. Scott B. Wilson (*Ibis*, 1887, pp. 130–150), and by the Rev. W. W. Fowler ('The Oxford Tutor') in his 'Year with the Birds.'

From the second half of January to the early part of May, 1890, my quarters were at Lausanne, a city which, as many people know, is set on the side of a hill and riven by ravines. All around are vineyards, but half-an-hour's walk further uphill brings one to the large wood of Sauvabelin, chiefly of beech and oak, with a few spruce-firs; consider-

able forests of the last being found a little higher up, especially on the roads to Berne and to Oron. Below Lausanne, and along the lake towards Morges, the cultivated ground contains much large timber and fine walnut-trees: attractive to insectivorous birds. In the Museum is a fair collection of local species; also a larger one which formerly belonged to the late M. Vouga, consisting of "European birds" so-called, according to Degland and Gerbe's list; but many of the specimens are not Swiss, and some belong to species which have never been seen in Switzerland, or even in the Old World—for instance, the American Bald-headed Eagle. Among its treasures are a mounted *Alca impennis* and an egg; there were formerly two eggs, but one was bartered for the remains of a Gorilla! Of course Geneva was visited, where I had the pleasure of becoming acquainted with Dr. Victor Fatio; short excursions were made along Lake Lemman and up the Rhone valley as far as Brieg; while, as regards Lausanne, my friend Mr. Hermann Goll, Dr. Larguier, the director, and M. Bastien, the curator of the Museum, assisted me in various ways.

The third week in April I went up to Chaux-de-Fonds, in the Neuchâtel Jura, to see M. Louis Nicoud, who has a fine collection of eggs; and, under the guidance of that excellent field-naturalist, attempts were made, in very bad weather, to find a nest of the Nutcracker—unsuccessfully, as will be seen under my notes on that species. This visit, however, induced me to migrate early in May to Neuchâtel, a very pretty, clean town, and one which, it is surprising to find, is so little frequented by English visitors, as it forms an excellent base for many interesting excursions. Its Museum has a European celebrity among geologists, owing to its association with Agassiz; and the ornithological gallery is of special interest to students of the Neotropical Avifauna, inasmuch as it contains the famous collection formed by the late J. J. von Tschudi, with numerous types of the species first described by him from Peru. The well-known director, M. Louis de Coulon, is now compelled by age to renounce the active part he

formerly took in the management of this Museum, which is, however, as it stands, a remarkably good specimen of the old-fashioned class, before life-like groups of mounted animals were thought necessary for the instruction or delectation of the public. The Neuchâtel fauna is particularly well-arranged; while in the general collection may be mentioned *Alca impennis*, and examples of two species of *Merganetta* from the rapid streams of the Peruvian and Chilian Andes; also a specimen of *Chen rossi* and three of *Bernicla ruficollis*, obtained years ago, when examples were to be seen in very few Museums.

Summer-quarters were found on Chaumont, a spur of the Jura, which rises about 2400 feet above Neuchâtel and 3850 above sea-level. The ridge is crowned with dense woods of spruce, which gradually become thinner to the eastward, until they end altogether on the top of the Chaseral (5280 ft.), which is separated from the main Jura by the elevated Val St. Imier. As there are no springs in that range, and consequently very few running streams (the inhabitants being almost dependent on rain-water, of which there is no lack), the Jura is not very rich in species of small birds. In other respects it proved to be an excellent retreat during the summer months, for the climate at Chaumont, and in the range generally, is less extreme than at the same elevation in the Alps: the view, extending over the lakes of Neuchâtel and Morat, and from Mont Blanc to Pilatus, is hardly to be surpassed; while, except in August, the weather was decidedly good, which was certainly not the case in the Alps. The electric explosion, followed by a tornado, on the 19th of that month was something to be remembered; but during the sultry hours which preceded that devastating storm the birds did not drop down dead on our ridge of the Jura (as I learned, from a lady's letter in the 'Times,' they did in other parts of that range), or I might have been able to add a few species to my scanty list of *Passeres*!

Descending to Neuchâtel early in September, I ran down with Mr. Goll to the Grisons, to get a glimpse of chamois

and other Alpine creatures, visiting a few museums on my way there and back. In those of Bienne, Soleure, and Fribourg, nothing particular was noticed, ornithologically; while the collection at Berne is too well-known to call for special remark. Zand's Museum of Alpine animals in the last-named city is, perhaps, worth a visit, though Zand is now very old, and his groups are dusty and faded. The same may be said of the once-famed Stauffer's Museum at Lucerne, which is no longer up to its former reputation. At Zurich the collection in the Polytechnic is decidedly good, and contains examples of some valuable exotic species. The finest museum on modern lines is, however, at St. Gall, where the initiative of the late Dr. Girtanner has been ably seconded by his son, to whom I was introduced; while the local specimens of birds are mounted by Mr. E. Zollikofer, who is not merely a skilled taxidermist, but an artist whose soul is in his profession. The groups of Wall-Creepers on the rock (in the Museum and at Dr. Girtanner's house); the Scops Owl recoiling in consternation before a beetle which, on being disturbed from its hiding-place, looks as if from its size it might prove an awkward customer: these and many others are works of art, and are of themselves worth a visit to the quaint old town—though it, too, has been much modernized since my last visit, twenty-eight years ago.

At Coire there is a very good local collection of birds, amongst which is an example of *Vanellus cayennensis* killed in the Grisons a few years since: probably escaped from confinement, though how it got so far up the Rhine valley is a mystery. In addition to fine specimens of the usual series of mammals, are the last Ibexes, all young, killed in 1888. The birds observed in the Prättigau are mentioned in my notes. In October I came back to Lake Lemman and settled at Vevey, where this paper was written. There I obtained some really trustworthy information from Mr. Eric Grand d'Hauteville, who, though still at school, has succeeded in mounting a very interesting little collection of birds in life-like attitudes, evidently the result of patient study of their habits.

It will be understood that, unless otherwise stated, my remarks refer to the districts mentioned in the title, and are merely the results of a short and limited experience in a country where the natural features tend to upset broad or general statements. For instance, the avifauna of the western portion of Lake Lemman is far richer than that of the upper end, especially in those migratory species which frequent open cultivated ground and flat shores. If my residence had been at Geneva, the character of my list would have been considerably modified, for no migration of importance appears to take place by the Valais, on the way to or from the south.

The greater part of this paper was written in November and printed in December last, but I have endeavoured to work in the results of the observations of two months more.

Turdus viscivorus, Linn.

The Mistle-Thrush was not seen or heard near Lausanne until the middle of March, and I do not think it is a resident. In the Jura it was plentiful—though very shy—from May till September; and birds were observed above Vevey till the end of October.

Turdus musicus, Linn.

The Song-Thrush is a migrant, and was not identified near Lausanne until April 13th, although it may have arrived a little earlier. Instead of being the familiar bird which we are accustomed to see on our lawns and hammering snails on the gravel walks, the Thrush, in Switzerland, is a shy, retiring species, frequenting the forests on the mountain-sides above 2000 feet, and seldom visible, except for an instant, as it darts, high in the air, from one tall fir to another. On Chaumont, where it was in full song in May and June (inferior in melody to that of English, and especially of Scottish birds), I never saw adults on the ground feeding, although later the young were noticed hopping along woodland paths. The nest is placed in the spruces, and is not easily found. In early autumn the Thrush is found on the fields, and for a short time on the vineyards; and I saw a

few dead birds in the Vevey market up to the end of October, together with Redwings; the Fieldfare is, however, the *Grive* of the dealers.

TURDUS PILARIS, Linn.

I saw only one Fieldfare near Lausanne until a slight thaw on February 27th, 1890, when numbers made their appearance on the fields, in bright clean plumage. In autumn they repassed, and up to the middle of February 1891 I saw a few on the mountains.

TURDUS MERULA, Linn.

The Blackbird is resident and was seen throughout the winter in the gardens of Lausanne and Vevey; it is common enough at Neuchâtel, but was never observed as high as the ridge of Chaumont.

TURDUS TORQUATUS, Linn.

The Ring-Ouzel is a migrant. It was fairly plentiful in the Jura, where some nests were still being built on May 23rd, when a few already contained young birds, and I saw a brood on the wing by June 2nd. The nest is placed on the branch of a spruce—generally one which is thickly hung with moss and lichen—and near the stem; seldom as low down as 15 feet, while often 40 feet or more from the ground—very different from the lowly positions affected by this species in the British Islands. The adult male attracts attention by sitting on the top of a tall fir and uttering vigorously his scolding *tett, tett, tett*. The bill in this mountain race is decidedly yellower than in average British examples, but much paler than the orange colour of the Blackbird. In autumn the Ring-Ouzel may be seen on the rowan-trees, and among the vineyards by the lakes, until the end of October.

SAXICOLA CENANTHE (Linn.).

The Wheatear is widely distributed in Switzerland from spring to autumn, and Mr. Scott Wilson has recorded the great elevation (8150 ft.) at which it breeds; but it is probably local in the Jura, where I seldom saw it.

PRATINCOLA RUBETRA (Linn.).

The Whinchat is fairly common from spring to autumn

in the valleys. The Stonechat (*P. rubicola*) has been obtained by Mr. E. Grand d'Hauteville, but it is very rare near Vevey.

RUTICILLA PHENICURUS (Linn.).

The Common Redstart was first seen on April 14th, and was often noticed afterwards on Chaumont as well as lower down, but it was not nearly so plentiful as the next species.

RUTICILLA TITYS (Scopoli).

The first Black Redstart—a male—was seen near Lausanne on April 12th, when sleet was falling, and on the 19th both sexes were observed at an elevation of 3000 feet in the Jura, where it was still bitterly cold. From the latter date onwards this species was everywhere abundant, and there were at least two nests, if not more, at the same time on our hotel at Chaumont, one of these being under the roof of the verandah, so that we could watch the process of feeding, &c., at about eight feet above our heads; the young were hatched by May 23rd. On June 2nd I found a nest with only four much incubated eggs in a shed on the wind-blown summit of Chasseral (5280 feet), but six is the usual number. The nest is a good-sized structure; and, whether on a ledge under eaves or in a hole in the wall, it is always well out of reach of cats, of which every cottage seems to possess at least one. Two broods are usual, and three are not rare. In autumn the latest date for the Black Redstart was October 29th, among the vineyards at Vevey.

Cyanecula suecica I did not see alive, but it is a well-known visitor. Most of the specimens in the St.-Gall Museum have red on the breast, but a few are unspotted blue.

ERITHACUS RUBECULA (Linn.).

The Redbreast was a bird which we were always expecting to see on our walks about Lausanne, but perhaps we looked for it too high, for only four or five were seen till well on in March, and it never came to the food freely exposed on our terrace. An unfinished nest was examined in the main Jura in April, but I very rarely saw or heard the bird on Chaumont, and the Black Redstart seems to take its place on all the moderately high ground. It is, however, not

uncommon near Vevey, among the sheltered gardens and vineyards, in autumn and throughout the winter.

DAULIAS PHILOMELA (Bechst.).

I saw and heard the Northern Nightingale (the *Sprösser*), near Lausanne, on April 30th and a few days later.

The true Nightingale (*D. luscinia*) is now almost, if not quite, unknown at Lausanne; but Dr. Larguier assured me that a pair formerly bred on his property in a spot which he pointed out. It has occurred near Neuchâtel.

SYLVIA CINEREA, Bechst.

On April 26th the arrival of the Whitethroat was noticed at Lausanne; and this was one of the few Warblers observed on Chaumont during the summer.

SYLVIA HORTENSIS, Bechst.

The Garden Warbler was in full and excellent song on Chaumont on May 22nd. Nest with four eggs, June 6th; young out of nest before end of month.

SYLVIA ATRICAPILLA (Linn.).

A male Blackcap was seen and heard near Lausanne on and after April 25th; the species is generally distributed on the low ground, but was not observed on Chaumont.

REGULUS CRISTATUS, Koch.

I observed the Golden-crested Wren in the Jura, but somehow I did not identify the Fire-crest (*R. ignicapillus*), which is, however, undoubtedly found and nests there, as well as on Lake Lemman.

PHYLLOSCOPUS RUFUS (Bechst.), PH. SIBILATRIX (Bechst.), PH. BONELLI (Vieillot), PH. TROCHILUS (Linn.).

The Chiffchaff was common in the Jura. So also was the Wood-Wren, but its plaintive call-note and "shivering" song were only to be heard on the warm slopes facing the south, among the beech and oak. Bonelli's Warbler was several times identified, on the slopes and even on the summit of Chaumont, especially during the latter part of summer, when the birds frequented the larches for insects, and were more visible than on the spruces. I have seen

the eggs of all three, and Pasteur Robert showed me a clutch of eggs of Bonelli's Warbler with a Cuckoo's egg. The Willow-Warbler seldom mounts to the ridge of the Jura, and is hardly known there as a breeder (Nicoud).

ACROCEPHALUS STREPERUS (Vieillot).

The Reed-Warbler was seen and heard among the reeds at St. Sulpice, Lake Lemman, on April 26th, close to a Swan's nest.

Opportunities were wanting for seeing the Marsh-Warbler (*A. palustris*) alive; but I know that it is found in suitable localities along the Rhine valley and its vicinity, from Coire to Zurich; also in the lower Valais, whence I have seen eggs.

ACCENTOR MODULARIS (Linn.).

The Hedge-Sparrow, like the Redbreast, was a bird for which I was always looking, but long in vain. I saw it at Lausanne on April 21st, and had observed it two days earlier in the Jura; I afterwards saw one sneaking about among some fagots on Chaumont. Seldom met with at Vevey, but said to be common at Montreux.

ACCENTOR COLLARIS (Scopoli).

The Alpine Accentor came under my notice in the Grisons. During the severe winter of 1890-91 individuals used to visit the terrace of a house above Montreux, but they were not on view when I called there*. Mr. Nicoud records this species as a winter visitor to the Doubs district of the Jura.

CINCLUS AQUATICUS, Bechst.

The Dipper is common on all suitable streams, and along the margin of Lake Lemman. There was a nest on a ledge of the cascade about a mile above Lausanne, and up to April 24th I used to watch the birds going in and out, probably feeding their young, but then some British boys from one of the "crammers'" establishments found the nest and promptly tore it down. All the birds seen had plenty of chestnut-brown on the breast.

* Since the above was written I saw a family party of six in the Val d'Anniviers.

PARUS MAJOR, Linn.

The Great Titmouse was by far the most numerous of those members of the genus which used to come to the pieces of fat hung from the trees in front of our hotel at Lausanne during winter. Swiss specimens are remarkable for the brightness of their colours.

PARUS ATER, Linn.

PARUS CÆRULEUS, Linn.

The Coal-Titmouse was not nearly so plentiful as the preceding species; it used, however, to come to the pieces of fat; and during the severe weather small parties might sometimes be seen on horse-droppings along the roads. The Blue Titmouse was more frequent. This, as well as the preceding species, might be seen hanging on the suspended pieces of fat at the same time, and it is hardly necessary to add that both are residents.

PARUS PALUSTRIS, Linn.

I did not see the Marsh-Titmouse, or its Alpine form, *P. borealis*, until the latter part of February: chiefly in the fir-woods. It breeds in the Jura, and is not uncommon wherever there are spruces.

PARUS CRISTATUS, Linn.

Owing, perhaps, to the thickness of the foliage, I did not see the Crested Titmouse in the Jura for some time, but it is tolerably common there, and towards the end of summer it shows itself more. In the Grisons, while sitting motionless waiting for roe-deer, this pretty bird would often be feeding within a foot or two of my head.

ACREDULA CAUDATA (Linn.).

The Long-tailed Titmouse is resident and generally distributed. Even in the most severe weather I never saw it touch the fat hung from the trees.

SITTA CÆSIA, Wolf.

The Nuthatch was very common at Lausanne, especially in the beech-woods, and it occasionally came to the suspended pieces of fat. Its loud love-note was first heard during the cold bright weather of early March, and by the middle of

that month the male was seen courting—spreading out his tail to its fullest extent and displaying the white spots, throwing somersaults, and performing other antics. On the ground this species hops like a Finch, and when working its way among the dead beech-leaves it might easily be mistaken for the male of *Fringilla cœlebs*.

TROGLODYTES PARVULUS, Koch.

Some weeks passed before I could see a Wren near Lausanne; and in the Jura the bird did not seem to be abundant. Its favourite places were timber-stacks in the forests. It is, of course, generally distributed.

CERTHIA FAMILIARIS, Linn.

The Tree-Creeper manages to find a living during the Swiss winter, and is rather plentiful.

TICHODROMA MURARIA (Linn.).

I was five minutes too late for a Wall-Creeper which had been on the walls of the University at Lausanne on February 25th, 1890; but on February 3rd, 1891, I had an excellent view of one at St. Maurice, above the frozen Rhone. Fine groups, brilliant in colour, are in the Museums of St. Gall, Berne, &c., and in private collections; in fact, there is reason to fear that this species is being overcollected. In the young bird the throat is of the same grey colour as the shoulders: not white, as in the winter plumage of the adult. Mr. Nicoud tells me that this species visits the cliffs of Doubs in March.

MOTACILLA ALBA, Linn.

First seen on the newly irrigated ground during a slight thaw on 25th February, 1890; generally distributed, and nested on the hotel at Chaumont.

MOTACILLA MELANOPE, Pallas.

The Grey Wagtail is a resident on Lake Lemman, ascending in spring; the first pair was seen on a rocky stream above Lausanne on April 6th. In the Jura it is found wherever there is water; and as a pair had a nest in the wall of the picturesque old castle at Valagin, above Neuchâtel, on June 28th, there must be two broods in the season.

MOTACILLA FLAVA, Linn.

On the afternoon of April 26th a flight of thirty or forty Blue-headed Wagtails alighted in a field of rye, then about three inches above the ground, on the Morges-Geneva road. I sat down and kept quiet, when many, in pursuit of insects, fed up to within a yard or two, and on being disturbed by passers-by (who were perhaps surprised to see me sitting like another Whittington on a milestone) they flew up, twittering, into some low fruit-trees, returning very quickly. I did not notice this species on the Jura ridge.

ANTHUS TRIVIALIS (Linn.).

The Tree-Pipit was identified at Chaumont on July 7th, and in September Mr. Goll shot one out of a party which were feeding on a mountain pasture in the Grisons; they looked so large and tawny that we hoped for something better.

ANTHUS PRATENSIS (Linn.).

The Meadow-Pipit was seen on newly-manured land near Lausanne in spring, and it undoubtedly nests in the main Jura, though Mr. Nicoud considers it a bird of passage; but it appears to be less common there than the Water-Pipit, while Chaumont is too thickly wooded to suit it.

ANTHUS SPIPOLETTA (Linn.).

The Water-Pipit breeds on the main chain of the Jura, but I did not see it on Chaumont until the end of August. In the Grisons it was very plentiful in September on the sloping irrigated pastures, and I noticed that when it flew up and perched on the roof of a chalet, it always selected one of the large stones employed to keep the shingles down, whereas the Black Redstart preferred the ridge or the gable.

LANIUS EXCUBITOR, Linn.

The Great Grey Shrike is a resident; I saw several in the months of February 1890 and 1891 round Lausanne and Vevey. While I was watching one—perched, as usual, on the topmost branch of a bush—it suddenly dropped as if shot, and the next moment the shadow of a soaring Buzzard

passed over, reminding me of old experiences of catching "passage-hawks" at Valkenswaard. I did not see this species on Chaumont.

The Lesser Grey Shrike (*L. minor*) visits St. Gall and other cantons of Eastern Switzerland. M. Bastien, the curator of the Lausanne Museum, has a curious Shrike (named *L. dubius* by Dr. V. Fatio), which appears to be a hybrid of *L. minor* with the Woodchat, *L. pomeranus*. The last is only a rare visitor to the east end of Lake Lemman, but a male, shot from the nest, is in the collection of Mr. E. Grand d'Hauteville.

LANIUS COLLURIO, Linn.

The Red-backed Shrike was common at Neuchâtel in May, but was not observed on Chaumont.

MUSCICAPA GRISOLA, Linn.

Neuchâtel, May 18th; not on Chaumont.

MUSCICAPA ATRICAPILLA, Linn.

A family party on the larches close to the Chaumont hotel on July 15th.

HIRUNDO RUSTICA, Linn.

First seen at Lausanne on April 6th, but I heard of its arrival at Ouchy, on the lake, some days earlier. Seldom seen so high up as Chaumont, and never observed breeding there. Many at Vevey until October 24th; last seen on 29th.

CHELIDON URBICA (Linn.).

The House-Martin appeared at Neuchâtel on May 8th, and swarmed there during summer; but its visits to Chaumont were rare.

COTILE RIPARIA (Linn.).

Noticed about April 12th; breeds in banks near Bienne and elsewhere in the flat country, but is rare at Vevey.

LIGURINUS CHLORIS (Linn.).

Seen and heard on Chaumont, though not common; also observed at Villeneuve in the depth of winter.

The Hawfinch (*Coccothraustes vulgaris*) visits the neighbourhood of Vevey in winter. (In coll. E. G. d'H.)

CARDUELIS ELEGANS, Stephens.

The Goldfinch must be to some extent resident, as I saw one near Morges during the intense frost of early March. Many were seen afterwards on the low ground, but none on Chaumont.

CHRYSOMITRIS SPINUS (Linn.).

The Siskin breeds freely in the Jura, and M. Nicoud tells me that he has found a nest with eggs by March 24th.

CHRYSOMITRIS CITRINELLA (Linn.).

Citril Finches were breeding in the Jura (in the locality so well described by Mr. Scott Wilson) by May 23rd, and I saw and heard them several times on Chaumont afterwards; but absence in England during June interfered with my observations.

SERINUS HORTULANUS, Koch.

The Serin Finch is common on the lower ground, but I did not see it on Chaumont.

PASSER DOMESTICUS (Linn.).

The House-Sparrow is resident, and common enough about the towns, villages, and the cultivated country up to about 2700 feet; but I never saw it at Chaumont, although all kinds of grain grew there, even if they did not flourish.

PASSER MONTANUS (Linn.).

The Tree-Sparrow was often observed about farms and villages, especially where walnut-trees abounded, up to about 2000 feet; not seen on Chaumont.

FRINGILLA CŒLEBS, Linn.

Resident everywhere—at least up to 4000 feet, and not only the most plentiful of Finches but the commonest bird in the country. The old males, brilliantly ruddy on the breast, began to sing loudly as soon as the frost broke up, the song being far finer than that of our bird. Young hatched by April 26th.

I did not meet with the Brambling, but it is a well-known visitor in hard winters; a few were seen at Vevey in January 1891.

ACANTHIS CANNABINA (Linn.).

The Linnet was building in the high Jura on May 23rd, and I afterwards saw it on Chaumont, but it was not plentiful.

PYRRHULA EUROPEA, Vieillot.

Only one, a male, seen on Chaumont, September 2nd. Said to be common in winter near Vevey.

LOXIA CURVIROSTRA, Linn.

During the winter Crossbills might be seen in the gardens of Lausanne as well as in the neighbouring woods. M. Nicoud assured me that, in the Jura, he had found eggs in December, and had seen the old birds feeding their young by January 8th, but eggs may be looked for up to the middle of April. Flocks passed over Chaumont on July 1st, and subsequently family parties frequented the larches, the light cones of which they carried off. Among spruces it is not easy to see the birds, but on the larches they may easily be recognized, even at a great height, by the sharply-forked tail.

A female Two-barred Crossbill (*L. bifasciata*) was observed above Vevey towards the end of 1889 by Mr. E. Grand d'Hauteville.

EMBERIZA CITRINELLA, Linn.

Resident and plentiful, even in the streets of Vevey, &c. In the Jura the Yellow Bunting nests in spruces (instead of availing itself of banks and low bushes); probably to escape the cats, which have a prowling-radius of at least a mile around each chalet.

The Cirl Bunting (*E. cirrus*) from the nest, as well as the Ortolan (*E. hortulana*), have been obtained by Mr. E. Grand d'Hauteville, near Vevey.

STURNUS VULGARIS, Linn.

The Starling was first seen on February 27th, 1890, on the meadows near Lausanne, where it afterwards became plen-

tiful ; but I only found it nesting in old trees, not in houses, as with us ; and it was never seen on Chaumont. In autumn vast flocks frequented the vineyards at Neuchâtel, and notices were posted in the streets, calling the attention of proprietors to the fact that, during the vintage, this and other species injurious to grapes were exempted from the protection conferred during the rest of the year by Swiss legislation. Seldom seen in winter at Vevey.

PYRRHOCORAX ALPINUS, Koch.

Flocks of the Yellow-billed Alpine Chough were observed, as might have been expected, in the Grisons during the month of September. I was unprepared to find this species as low down as the vineyards above Lake Lemán, but on November 13th, while walking up to Les Avants from Montreux, several flights passed over—some so close that I could see their yellow bills—and settled down in the higher vineyards. Their note first attracted my attention ; it was a rolling *tir-kee, tir-kee*, which, when uttered in chorus, was really melodious. Of course I am well aware, from experience in Spain and in the Pyrenees, that this species has a harsher note when disturbed ; but these birds were evidently in the best of humours, anticipating something good (probably small snails) among the now neatly-tended vines. I afterwards saw this Chough on several occasions, tumbling about and “kiting” after its fashion.

The Red-billed Chough (*P. graculus*) I did not meet with in the wild state, but I heard of it as near as Champéry. Mr. E. Zollikofer has both species in his aviary at St. Gall.

NUCIFRAGA CARYOCATACTES (Linn.).

In winter the Nutcracker is widely distributed, and in February one was feeding for some time in the garden of my friend, Mr. Goll, at Lausanne. Nests with eggs were taken on March 21st and 24th, in the main chain of the Jura, and one of these, with its contents, was presented to me by M. Nicoud, who subsequently showed me the site. The nest, quite different from that of the Jay, but not unlike that of *Perisoreus infaustus*, was in a red spruce, close to the

stem, and about 15 feet from the ground. In April, a long and fatiguing search with M. Nicoud for another nest was in vain. When courting, and even when building, the birds are very noisy, but as soon as incubation begins they become silent, shy, and stealthy in their movements; so that it seemed like looking for the proverbial needle to search for a nest in the miles of thick firs. However, having been taught where to look and where it was no use looking, I found a nest on Chaumont; but, alas! the birds had flown. Before visiting the Jura I was under the impression that the Nutcracker was common in that range, but my experience now is that the bird is not numerically abundant there at all. It is true that a good many nests have been obtained in the chain, from Neuchâtel to Soleure; but that is owing to the fact that forests in the Jura are less encumbered with snow than in the Alps, and also that several persons are on the look-out for them there. The Val d'Anniviers, opposite Sierre, in the Valais, is said to be a good place for Nutcrackers; but whether it is workable in March is another matter. Nests with eggs and young are in the museums at Coire, St. Gall, and in various private collections.

It was in the Prättigau that the best opportunity presented itself for observing the ways of the Nutcracker. Between September 14th and 18th this species was quite common among the hazel-bushes; and the top of a low wall, within five minutes walk above the village where I was staying, was a favourite anvil on which to hammer the nuts, their shells lying thick on it. Every few minutes a bird might be seen flitting along the hillside—its widely-spread tail-feathers displaying the white spots on their tips—with a somewhat dipping flight, less laboured than that of the Jay. Often, alighting on a sloping patch of sward, the Nutcracker would draw itself up till its neck seemed unnaturally elongated, then give a few skips, and, taking a short flight, make a furious attack on a bush, tearing off a whole cluster of nuts. This was sometimes rejected, after a comically critical examination, and another cluster would be torn off; after which the bird would fly up to some tolerably wide branch of a fir,

and hammer the nuts energetically to free them from their shucks, pausing to look up, as if for admiration ; so like our old friend Punch, after disposing of his enemies, that I almost expected the “rootitoot” of triumph to follow. Then the bird would hop rapidly up the branches—as if on the rungs of a ladder—to the top of the tree, dash away across a ravine, settle on a bush, and be lost to view for a time, returning with its crop quite distended with nuts. I watched the antics of these amusing birds for hours, often within easy gun-shot and by the aid of a binocular ; in fact, nearly all one Sunday was spent with the Nutcrackers. One of the notes is a peculiar *gurre, gurre* ; but there is another, like a sprung rattle.

GARRULUS GLANDARIUS (Linn.).

The Jay is exceedingly common everywhere, and resident.

PICA RUSTICA (Scopoli).

The Magpie is only too plentiful, but far less so than the Jay, and does not ascend so high. I do not find it noted from Chaumont.

CORVUS MONEDULA, Linn.

The Jackdaw is found about several old fortified towns (such as Morat, Fribourg, Romont, &c.) and *châteaux*, but it is very local.

CORVUS CORAX, Linn.

The Raven is now almost confined to the mountains, where I saw and heard it several times. A pair inhabit that grand cirque, the Creux-de-Vent, above the Val de Travers, between Neuchâtel and Pontarlier.

CORVUS CORONE, Linn.

In Switzerland the prefix “Carrion” cannot appropriately be applied to the Crow, for that bird virtually takes the place of our Rook, eats similar food, and is equally at home in the wooded mountains, the fields, the gardens, and about the houses, even in towns like Lausanne and Vevey. At the last-named place it stalks along the parapet by the lake, within a yard or two of the passers-by, strives with the Gulls

(*Larus ridibundus*) for the bread thrown to them, and is almost as tame and impudent as its Indian relative, *C. splendens*. In autumn it displays great adroitness in dropping walnuts from a height on the flat copings of the walls of the vineyards, in order to break the shell, and the mark is rarely missed. On November 7th I saw a Crow stoop down to the lake and distinctly ruffle the surface with his wings and body, to capture a small dead fish, which he was made to drop by the Gulls. Round the lakes it makes its nest early in April—as with us—in large open trees; but in the Jura the spruce-firs afford it better concealment. A score of birds may often be seen together.

CORVUS CORNIX, Linn.

I only observed the Hooded Crow once, on February 27th, along with a number of the common species, on the fields between Morges and Lausanne. I heard of one near Vevey in November.

CORVUS FRUGILEGUS, Linn.

The Rook is a migrant: I counted a band of eleven below Lausanne on February 27th, and saw another flock further off. There was, however, a solitary individual which frequented the gardens of our hotel at Lausanne during the winter, stalking up and down on the terrace within a few yards of the windows: a genuine, old, well-wattled Rook. This bird was on the best terms with a Crow, and the two held the garden against all intruders; uniting to attack, with great vehemence and outcry, a male Sparrow-Hawk which used to sweep over the hedges of evergreens with tolerable regularity between noon and one o'clock. When scrag-ends of meat or bone were tied to the ends of branches so slender that in trying to reach them these birds must necessarily topple over, they would make dashes on the wing at the food, which was purposely tied with weak thread, and noisy was the jubilation when the spoil was carried off. In December 1890 a small flock passed over Vevey, and in the first days of January 1891 we found that here also a solitary Rook had taken up his abode among the pollarded planes on the terrace; but after a week of intense cold he was seen no more.

ALAUDA ARVENSIS, Linn.

I saw no Sky-Larks till April near Lausanne, and till May near Neuchâtel; not many even then, according to our ideas; but the bird is found sparingly in the valleys and breeds there. Large flocks came in autumn, but few remained after the first snow fell.

ALAUDA ARBOREA, Linn.

The Wood-Lark undoubtedly nests at Chaumont, where I saw several pairs, and heard the song; the clumps of trees on that hillside, with a southern aspect, are just suited to it.

CYPSELUS APUS (Linn.).

First seen at Lausanne April 27th; common afterwards.

CYPSELUS MELBA (Linn.).

On May 20th I ascended the tower of the münster at Berne, to visit the well-known breeding-place of the Alpine Swift, before the hand of improvement sweeps away the old roof and erects a brand-new spire. Only some eight or nine nests—solid structures about three inches wide and resembling the bottoms of tartlets—were then built; for the weather had been cold, and several dead birds were lying under the eaves, while only one nest contained eggs, two in number. I can add nothing of importance to the descriptions given by Mr. Scott Wilson and the Rev. H. A. Macpherson of this fine species. On September 17th M. Goll and I saw five individuals, evidently on passage, in front of the Scesaplana, in the Prättigau, our attention being arrested by their dashing flight and white underparts.

CAPRIMULGUS EUROPÆUS, Linn.

The Nightjar is found in the lower districts in summer, but only in small numbers, or at most it is very local.

IYNX TORQUILLA, Linn.

Seen at Lausanne April 27th; heard a few days earlier.

PICUS MARTIUS, Linn.

The Black Woodpecker was observed several times on Chaumont and in other parts of the Jura, but I was unsuccessful in my search for an inhabited nest. The laugh of the

male is very loud, and sometimes startling, though far less harsh than that of the male Green Woodpecker.

GECCINUS VIRIDIS (Linn.).

The Green Woodpecker is very common in the low wooded country, but I did not find it on the fir-covered ridge of Chaumont. I have watched with a binocular both sexes, in April, uttering their note, and may state that it is much softer and more rippling in the female than in the male. During the intense cold of January 1891 I observed this species searching systematically for food under the eaves of farm-houses, and also sending its bill far under the "shingles" of roofs exposed to the sun. I never heard its laugh as long as the severe weather lasted.

GECCINUS CANUS (J. F. Gmelin).

I saw this species only in the Grisons; it looks distinctly smaller and duller in colour than the Green Woodpecker, on the wing. Local specimens are in the Neuchâtel Museum, but it is rare in the Jura district; also of rare occurrence near Vevey (E. G. d'H.).

DENDROCOPUS MAJOR (Linn.).

The Great Spotted Woodpecker is generally distributed in the wooded districts, and was often observed, even in Lausanne itself. On April 6th, close by the Tribunal on the Mont Benon, a Sunday crowd stood watching a fine male bird which was sending the chips flying from a rotten place in a large elm, 10 to 15 feet above the heads of his observers, and the next day he was working hard on the same tree, but on the other side; the amount of splinters and rotten wood at the foot of the tree would have well filled a bushel-measure. A female was sitting on her eggs in a hole in a spruce fir on May 23rd, in the Jura. I often saw this species on banks (as well as on trees), but never on the level ground among the leaves, where the Green Woodpecker is frequent.

Local specimens of *D. minor* are in all the collections; of *D. medius* chiefly in those of the east and of the Rhine valley, though there is an example in the Neuchâtel Museum from that canton.

PICOIDES TRIDACTYLUS (Linn.).

I saw the Three-toed Woodpecker in the Grisons ; it occurs in many of the Alpine forests, but not in the Neuchâtel Jura.

ALCEDO ISPIDA, Linn.

The Kingfisher was observed in all suitable localities.

The Roller (*Coracias garrula*) and the Bee-eater (*Merops apiaster*) are rare visitants, but Swiss specimens are in many museums.

UPUPA EPOPS, Linn.

The Hoopoe was first seen on April 18th, on the willow-covered ground between Lausanne and Neuchâtel ; it is fairly common there during summer, and sometimes nests in the gardens of Lausanne and Ouchy.

CUCULUS CANORUS, Linn.

Common in the Jura, and often seen and heard on Chaumont ; plentiful near Vevey (E. G. d'H.).

SYRNIUM ALUCO (Linn.).

The Tawny Owl is widely distributed in Switzerland, including the Jura.

NYCTALA TENGMALMI (J. F. Gmelin).

This thick-plumaged Owl is found in many of the fir-woods of Switzerland, and I saw it several times in the Jura, where its nesting-places—generally a hole previously occupied by the Black Woodpecker—were pointed out by M. Nicoud, who gave me a clutch of three eggs. I have heard the bird calling on a dull day, as well as by night ; its cry being intermediate between that of the Little Owl and of the Scops, but more like that of the latter.

The Little Owl (*Athene noctua*) is resident in small numbers in the low country ; the Scops Owl (*Scops giu*) is also found there in summer. The Eagle Owl (*Bubo ignavus*) is to be found in most of the deep ravines, and a pair or so inhabit the Gorges du Chauderon, &c., near Montreux ; also a few suitable spots in the Jura. The Long-eared Owl (*Asio otus*) is resident ; *A. accipitrinus* is a bird of passage. The Barn Owl (*Strix flammea*) I believe to be rare. The Pigmy Owl

(*Glaucidium passerinum*) is chiefly known, in Switzerland, as an inhabitant of the forests of the Grisons, though it may perhaps range for some distance northwards along the Rhine valley. Mr. E. Zollikofer, of St. Gall, has a cageful of these amusing little birds, one of which has laid many eggs.

Readers of this journal will be aware that Drs. V. Fatio and Th. Studer have published an excellent Catalogue of the diurnal birds of prey, with coloured maps showing their distribution (*cf.* Ibis, 1889, p. 394). Of this I have availed myself in the following remarks on some of the rarer or more interesting Swiss species of Raptores.

GYPS FULVUS (J. F. Gmelin).

About a dozen occurrences of the Griffon-Vulture are on record, and local examples are in the museums of Berne, Sion, and Coire; another from the Grisons being at Schaffhausen. The Coire bird is immature and was killed in October or November; most of the others were shot in May and June. No Swiss breeding-place is known.

Two examples of the Black Vulture (*Vultur monachus*) are said to have been shot near Pfäfers and Sargans, in the valley of the Rhine, about 1848-49, but no Swiss specimen is in existence.

NEOPHRON PERCNOPTERUS (Linn.).

The Egyptian Vulture has long been known to nest regularly on Mont Salève, just within French territory, but immediately above Geneva; and further south, in Savoy, it has several breeding-places. M. Alfred Vaucher, whose acquaintance I made, has given some interesting details in the above-mentioned Catalogue; and he told me that there was little doubt of the occasional nesting of this species still further north, namely in the Jura. On Mont Salève the birds are keenly watched by collectors; the nests are robbed nearly every year, and, what is worse, the owners are often shot.

GYPAËTUS BARBATUS (Linn.).

Between 1801 and 1887 eighty-eight occurrences of the Bearded Vulture are recorded in Messrs. Fatio and Studer's

Catalogue; of these, 57 examples are existent in various museums and private collections. Whenever a bird is seen every possible effort is made to obtain it, as it fetches a high price, and ere long this species will have ceased to be indigenous in Switzerland. The last example obtained was a bird found poisoned near Viège (Visp), in the Valais, about the end of February 1886; it now occupies a central position in the Museum at Lausanne. It is said that this was an old female (there is very little red on the breast) which had been known for 20 or 25 years as nesting on the Bietsch-horn; but the curious thing is that the chasseurs of the Valais knew of no other Bearded Vulture, although, if she nested, she must have had a mate. A certain Benedict Henzen has furnished some wonderful notes:—how he saw a Bearded Vulture attack a child, which had to lie down flat and hold on to the rocks to avoid being dragged (*entraîné*) over a precipice, while a man who came to the rescue with a loaded gun was driven by the attacks of the bird to take refuge in a hut; how another carried off a kid three months old; how, in 1870, a lamb, also belonging to Henzen, was carried from the Grütene to the Stockgraben, where it remained bleating for two days until the Bearded Vulture "*revint le chercher*":—beyond which deponent sayeth not. Dr. E. de Fellenberg, who contributed these notes to the Catalogue in 1887, says that he has no reason to doubt these and similar statements; but those who have examined the weak feet and toes of the above species will form their own opinion as to his credulity!

The Museum of St. Gall possesses a superb and probably unrivalled series of Bearded Vultures, from various parts of Europe, Asia, and Africa, formed by the Drs. Girtanner.

CIRCUS ÆRUGINOSUS (Linn.).

The authors of the Catalogue say that the Marsh-Harrier is never found in Switzerland during the winter; but on February 26th I had an excellent view of a bird of this species—apparently an immature female—beating over a marshy creek near St. Sulpice, on Lake Leman. It was

certainly not the Black Kite : a bird which, Dr. Fatio thinks, is sometimes found there in winter.

The Hen-Harrier (*C. cyaneus*) is chiefly a migrant. The Pallid Harrier (*C. swainsoni*) is a rare visitor ; a local specimen is in the Neuchâtel Museum.

CIRCUS CINERACEUS (Montagu).

On June 25th I saw a pair of Montagu's Harriers quartering the moorland near Pontarlier ; the male was a dark grey bird, but not one of the black variety.

BUTEO VULGARIS, Leach.

Some Buzzards are resident, but the species did not become plentiful till towards the end of February ; it does not go high up in the mountains, even in summer. Considerable migrations are on record. In the Prättigau, at about 3500 feet, one pounced upon, and afterwards dropped, a Shrew, which proved to be of rather a rare species, and M. Goll preserved it.

BUTEO LAGOPUS (J. F. Gmelin).

I had a good view of a Rough-legged Buzzard mobbed by two Crows and a Magpie early in January 1891 ; the bird settled close to me. This species is undoubtedly a visitor on migration ; but the authors of the Catalogue add that it *breeds* on Mont Salève and in the valley of the Rhone (Bas Valais). I begged M. Vaucher, one of the authorities, to make certain of this, for, if the identification is correct, this extension of its breeding-range southward is most remarkable. He had not preserved the bird, and there is not, so far as I know, any Swiss example shot from the nest, nor do I expect to hear of one !

AQUILA CHRYSÆTUS (Linn.).

The Golden Eagle was seen by me only on the face of Mont Vilan (7800 feet), in the Grisons. Specimens are in every museum ; in that of Coire there is a fine case containing two birds which were killed while fighting.

The Spotted Eagle (large form) appears to be chiefly a visitor to the open country round the great lakes. The same may be said of the White-tailed Eagle (*Haliaeetus albicilla*),

which is, however, far more frequent, mostly in immature plumage. The Short-toed Eagle (*Circaëtus gallicus*) nests annually, according to M. Vaucher, on the wooded portions of Mont Salève ; also, irregularly, in other parts of Switzerland. The Osprey (*Pandion haliaëtus*) is known to breed sparingly near Schaffhausen and in the vicinity of all the large lakes, while it is not uncommon on passage. In January 1891 I saw one over the upper end of Lake Lemán.

MILVUS MIGRANS (Boddaert).

The Black Kite was first seen on April 10th, and often afterwards over the Lake of Geneva. There it is common ; while several pairs were always to be seen on the Lake of Neuchâtel, though the bird rarely showed itself above Chaumont. I often saw it drop down upon surface-fish, and eat them from one foot as it flew, in the manner described by Mr. Scott Wilson ; and I also observed that while one of a pair was fishing the other was soaring at a great height, as he has stated. Though common on the large lakes and rivers, the Black Kite is rare elsewhere ; it migrates early.

The Red Kite (*M. ictinus*) is more generally distributed, but I never saw it alive in Switzerland.

ASTUR PALUMBARIUS (Linn.).

The Goshawk is resident in the low country. It was seen near Lausanne, and often in the Neuchâtel Jura, where I tried in vain, unassisted, to find the nests of two pairs of birds. One of these was undoubtedly near the well-known Pierre-à-Bot (a huge erratic boulder, brought by ice from the Mont Blanc formation), but that part of the forest was 2000 feet below the top of Chaumont, and there was the climbing back to be considered !

ACCIPITER NISUS (Linn.).

The Sparrow-Hawk is very common. On Chaumont I saw a female carrying off something—probably a chicken—so heavy that her legs were dragged down to their full extent, and she could scarcely reach the shelter of the trees. A nest with four eggs, taken on May 23rd, was made entirely of twigs of larch.

PERNIS APIVORUS (Linn.).

Owing to absence in England during the greater part of June, I did not see the Honey Buzzard on Chaumont till the beginning of July. There were two pairs, and their nests were, I believe, about three miles apart; but my search was vain, for in those dense woods the birds were soon lost to view; moreover, the nest is usually, I am told, on a thick spruce-fir. A female often flew close past the hotel, sometimes just clearing the gable, and once the adult male was recognized by his grey head, but in a moment they were over the ridge, where the eye could not follow them. In August the young were on the wing, attended by their parents; the latter answering immediately and sweeping over me whenever my imitation of the cry of the young was accurate; their *wee* or *kee* is very shrill and less "mewing" than the call of the Common Buzzard. We frequently came upon the remains of the nests of wasps and wild bees, torn up.

FALCO PEREGRINUS, Tunstall.

Observed near Lausanne in March; well known and widely distributed in the lower valleys of the mountains, but said to be rare and unknown as a breeding species in the Grisons and Tessin.

FALCO SUBBUTEO, Linn.

I saw two young birds taking short flights from the tops of some spruces on Chaumont, early in August. In Switzerland the Hobby appears to be remarkably bold and powerful, inasmuch as, according to the authors of the Catalogue, it captures Pigeons and Partridges!

The Red-footed Falcon (*F. vespertinus*) is an irregular visitant.

FALCO ÆSALON, Tunstall.

A Merlin swept past me on Mont Vilan, in the Grisons, on September 15th; it is considered a rare species in Switzerland.

FALCO TINNUNCULUS, Linn.

The Kestrel is undoubtedly common, but it did not come under my notice so often as the Sparrow-Hawk.

Of the water-birds I can say little. The Cormorant occurs on the lakes; the Grey Heron was sometimes seen flagging along the low shores near Neuchâtel; the Purple Heron is a visitor; the Squacco Heron is common on passage, and may perhaps be found nesting among the reedy swamps near Orbe, where the Bittern used to breed, though drainage has much diminished the area of its haunts. The Little Bittern is widely distributed and nests as near Lausanne as St. Sulpice. A Flamingo (*Phænicopterus roseus*) obtained on the Lake of Neuchâtel on October 19th, 1865, is in the museum of that town; so are also local examples of the Grey Lag, White-fronted, Lesser White-fronted, and Bean Geese; as well as such maritime species as the Eider Duck, the Velvet Scoter, and others. The western half of the Neuchâtel lake is frequented, so long as the water is open, by almost all the Ducks in the European list; and Lake Lemman (which never freezes), though too deep to afford good feeding-ground, has attracted almost an equal number of species, though fewer individuals. Those which I have identified were the Golden-eye (*Clangula glaucion*), common in February and March; the Tufted Duck (*Fuligula cristata*), which is semi-domesticated at Geneva; and the Pochard (*F. ferina*), seen in April near the marshy delta formed by the Rhone, where a good many Teal are found. The following, however, may be mentioned under separate headings.

COSMONETTA HISTRIONICA (Linn.).

M. Bastien's collection at Lausanne contains a male Harlequin Duck shot by him at Lully, on the lake, September 12th, 1865.

MERGUS MERGANSER, Linn.

The Goosander nests (or has nested) on the island of St. Pierre, in the Lake of Bièvre, and also near Auvier, on the Lake of Neuchâtel, where the low sandy shore is fringed with pollards. There, early on the morning of May 18th, I had an excellent view of an adult male, and the parents with the three downy nestlings are in the Museum of Neuchâtel. In December 1890 and January 1891 a flock consisting of fourteen were often seen in front of our windows:

one was an old male in superb plumage, and there was a younger male with less white, while the rest were females or birds of the last season. Other flocks were scattered along the lake.

The Red-breasted Merganser (*M. serrator*) and the Smew (*M. albellus*) are well-known visitors to the lakes; I saw four of the latter in February 1891.

CYGNUS OLOR (J. F. Gmelin).

The Mute Swan is found on the lakes in a semi-wild state, and may often be observed taking long flights in line, even at some distance from broad water; for instance, I have seen birds flying across the valley of the Aar at Berne. A pair which had a nest close to the pier at Ouchy formed a great attraction to visitors: the female was sitting on four eggs on March 22nd; by the 26th or 27th she had eight; by April 27th some of the young were hatched, and by May 2nd six birds were on the water, two eggs being unproductive. That is less than the period which I have given in my 'Manual'; probably it varies somewhat according to climate in this as with other species.

COLUMBA PALUMBUS, Linn.

Flights of Ring-Doves were observed coming from the direction of the Rhone valley on April 5th, after which the species became common in the wooded districts, including the Jura, till October.

COLUMBA CENAS, Linn.

The first Stock-Doves were identified near Lausanne (a flock of eight) on February 27th; I afterwards saw many pairs in the wood of Sauvabelin, above Lausanne, where they breed in the hollows of the old trees; also in the Grisons.

The Turtle-Dove (*Turtur communis*) occurs, but appears to be rather uncommon in the lake districts, as well as in the Jura.

TETRAO UROGALLUS, Linn.

The Capercaillie is still tolerably abundant in the main Jura, and also on Chaumont, as well as in the Alps. After the love-season the males frequent high spruce-clad localities,

while the females are often found lower down the slopes, where the beech and oak are mingled with the firs.

The Black Grouse (*Tetrao tetrix*) is unknown in the Jura. In the Alps generally it is well known, and in the Grisons it is even plentiful.

BONASA BETULINA (Scop.).

The Hazel-Grouse is found in the Jura, as well as in the Alps, and I often saw it on Chaumont; especially from the beginning of July onwards, when the birds were in coveys. These are fond of basking in slight open patches on the hill-side, where large timber has been felled, and on being flushed they immediately flutter up into trees, where, however, they do not stay long. The call-note is a loud, clear *b-chick* or *b-cheek*.

In the Grisons we came upon many fresh tracks of Ptarmigan (*Lagopus mutus*) in the snow, but did not try to flush any on that occasion, as we were after chamois. In years past I have seen many. The Ptarmigan is not found in the Jura.

PERDIX CINEREA, Latham; CACCABIS RUFA (Linn.); CACCABIS SAXATILIS (Meyer).

The Grey Partridge inhabits the cultivated region, but it is not plentiful; while the "French" Red-leg is uncommon or very local. The Rock or Greek Red-leg (the *Bartavelle*) is well known in the Valais and in most of the mountainous portions of Switzerland. I have seen the Barbary Partridge (*C. petrosa*) hanging up in the shops at Vevey; probably imported from Sardinia.

I heard grave complaints of the sad diminution in the number of Quails which visit Switzerland to breed. Some Swiss sportsmen seriously attribute this to the enormous number taken in Egypt in spring since the British occupation, and they are fully persuaded that for several years past Londoners generally have been battenning on Quails; in fact, they feel inclined to say, with St. Jerome (slightly altered), "Tu coturnicem eructas" when they meet an Englishman!

The only member of the Rallidæ that came under my notice was the Coot (*Fulica atra*) on the Lakes of Lucerne

and Leman. Nor were my opportunities great for seeing Waders. The Lapwing was observed over the low ground; the Common Sandpiper (*Totanus hypoleucus*) was seen in pairs along the Broye, which connects the lakes of Neuchâtel and Morat; and on April 26th five Redshanks were feeding on the marshy shore below Lausanne. M. Bastien has several examples of the Turnstone (*Streptilas interpres*); also a Terek Godwit (*Terekia cinerea*), shot in spring on Lake Leman, while I believe that another from Neuchâtel is in the Vouga collection. All the ordinary Scolopacidæ are to be found in the local collections. Woodcocks were on passage on November 20th, and were comparatively plentiful, but there are not many "to the acre" of mountain woodland.

HYDROCHELIDON NIGRA (Linn.).

The Black Tern was observed daily on the lake of Neuchâtel in autumn; it occurs on passage in large numbers on Lake Leman.

The White-winged Black Tern (*H. leucoptera*), the Whiskered (*H. hybrida*), the Gull-billed (*Sterna anglica*), and the Common (*S. fluviatilis*) have all been obtained in breeding- as well as in autumn-plumage. I was surprised to find in the Museum at Geneva an adult specimen of the Roseate Tern, *Sterna dougalli*: one of a pair shot on the lake on May 17th, 1860. This species I had always considered as exclusively maritime, nor should I have ever suspected it of migrating across the Continent, on the way to or from the Mediterranean, where it is known to occur.

LARUS RIDIBUNDUS, Linn.

The Black-headed Gull is said to breed in the marshes at the mouth of the Dranse, on the Savoy side of Lake Leman, on which it is found all the year round—not leaving us even in January 1891, when 28° and 30° of frost were not uncommon. Plenty had full black heads on March 4th, 1890, when the thermometer was at 20° and the rocks were coated with ice; while by November 14th several of the many birds at Vevey showed a distinct approach to a hood. A dark line gradually runs from each ear-patch across the head; later, a similar and parallel line grows up from the eyes, so

that the head appears to have two narrow bands of dusky grey; then the dark feathers increase between; and lastly they come on in front, till the base of the bill is reached. A few birds have almost complete hoods at the time of writing this. They are easily observed, for they are accustomed to be fed with bread (one baker being a recognized purveyor of "pain pour les mouettes" cut up in pieces, at ten centimes a bagful), and as soon as a window is opened in the morning they come flocking up, catching the pieces thrown to them without a miss (except when they come into collision), and amid deafening clamour. If one bold bird takes a piece from my fingers, others will often follow suit, while the same individual will take pieces over and over again; but at other times they will all sweep by in silence, looking wistfully at the extended morsel. During the severe cold I gave them fat meat.

LARUS CANUS, Linn.

In January 1891 I identified several adult and immature examples of the Common or Blue Gull, at Vevey and along the lake. The white tips, after the subterminal black alar bar, render the former very conspicuous; while the dark outer edges to the wings in the young contrast strongly with the whitish border in *L. ridibundus*.

I have also seen at a distance a large grey-backed Gull, probably *L. cachinnans*, and a black-backed species, which was, I think, *L. fuscus*; it was hardly large enough for *L. marinus*. The Little Gull (*L. minutus*) is sometimes common on passage; the Kittiwake (*Rissa tridactyla*) and some other species also occur.

The three species of Colymbidæ are found on the lakes; a Black-throated Diver in the Neuchâtel collection being in full breeding-plumage, while a Great Northern Diver is so young that a few filaments of down are still adhering to its head.

No Grebes have come under my notice at this upper end of Lake Lemman, but all the European species are represented in the Swiss museums.

Hôtel des Trois Couronnes,
Vevey, February 16th, 1891.